

MEMORANDUM

To: Mr. W. F. Friedman,
Executive Secretary
NSA Scientific Advisory Board

From: B. S. Wilkes

Subject: Report on Visit to GCHQ
September 9-11, 1954

Date: December 18, 1954

I arrived in London about 10:00 P.M. on September 8 and went directly to Col. B. S. Pilling's office to discuss arrangements which he had made for my proposed visit to GCHQ September 9-11. He suggested right away that it might be just as well to go to Cleethorpes.

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early this morning of September 9 as the afternoon or evening of September 8. I accepted the suggestion and during the hours before lunch and with the assistance of Col. Fullings' secretary I made hotel reservations to stay in London the nights of September 8 and 11. She also handled my hotel reservations at Cheltenham, provided me with information concerning the dates of train service between London and Cheltenham, and made a plane reservation for me, ^{to Paris} on September 12 to catch a MATS plane leaving Paris on the 12th for Washington. Col. Fullings and I went out to lunch at one of the clubs near Grosvenor Square.

After lunch I talked with Col. Teller for more than two hours about the purpose of my visit, the U. S. military and civilian personnel stationed at GCHQ, the extent of inter change between NSA and GCHQ personnel, the organization of GCHQ, and other similar matters. I found him to be very alert, energetic, and enthusiastic throughout the more than four hours of time I spent with him that day.

3 I left London in the morning of December 9 and arrived in Cheltenham shortly after noon when I was met by one of Col. Teller's assistants who took me straight to Col. Teller's office.

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I spent the entire afternoon

with Col. Zeller and Dr. Rutledge discussing the organization of G C 4 Q. They went into considerable detail concerning the reorganization of G C 4 Q which has been announced on ~~the 11th instant~~
~~the 11th instant~~

on August 7, referring me to his memorandum of 11 August on the subject. In briefing me on ~~the~~ the organization of G C 4 Q Col. Zeller took up the various divisions and tags, pointing in a completely thorough manner one-by-one, indicating how the existing set up would be changed under the reorganization. Col. Zeller also gave me an excellent briefing on the U. S. military and civilian personnel

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stationed at G C HQ.

With this background of information in hand concerning G C HQ I explained in some detail that I was particularly interested in talking to the appropriate G C HQ personnel on the following subjects:

(1) The organization of T/A effort and how closely it was integrated with C/A effort.

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(2) Problems of personnel recruitment and selection.

(3) Problems of quantification and graphical presentation of intelligence concerning [redacted] air, sea and land military activity.

(4) Mathematical and statistical problems arising in C/A and T/A.

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I explained that being a
non-Commissioned officer, I was
by profession I had a
natural interest in TD,
but that as a member
of VSA/SAB and as a
member of the Robertson Study
Group I had developed
a rather strong interest
in TD, and (C).

With this layout of
interests before him, Col.
Zeller and Dr. Rutledge
proceeded to set up
a series of appointments
for me for September 10.

Having spent the entire
afternoon with Col. Zeller
and Dr. Rutledge, I was
taken by Dr. Rutledge to a little
sherry party at his
home at 5 o'clock
at which Col. Zeller and
the following G.C. HQ

2 staff members were present

[redacted] and J. T. Tamm.

My first visit on
February 10 was to

the office of

chief instructor of the

Paris, [redacted] at 5 C.H.O.

He outlined the general
policy for recruiting
young men from the
universities for the
professional grades. He

pointed out ^{secretly} the difficulties
involved in those existing
at M.S.A. in providing

able young men enough
information about the
work of G.C.H.O. to
enable them to make

an ~~superior~~ ^{wise} self-convinced
decisions as to ^{want} go into the work
or not. He believed that

It is not possible to make
any accurate statement
as to the number of
young men available
at present.

went into some detail as to how the British Civil Service System operates. I can easily see from the thoroughness of this selection procedure

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why the British Civil
servants, as a class,
are so corrupt. I
joined the Congress
that many of the personnel
of GCHQ had spent
much if not most of
their careers in that
work.

~~Intelligence~~ ~~Personnel~~ ~~Com~~
~~Intelligence~~ ~~Personnel~~
~~Com~~

In reply to my inquiry concerning tests and recommendations for the selection of C/A and T/A personnel he stated that they had begun some experimental testing with a series of tests known as Progressive Matrices and referred me to Mr. [redacted]

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[redacted] for [redacted] details

concerning the results of these tests, [redacted]

showed me some

results which he had obtained by giving the tests to personnel

at GCHQ as well

as [redacted] new applicants.

He was quite optimistic

about the possibilities of using the progressive matrices to improve their selection procedures for T/A and C/A personnel. In my own opinion NBS would do well to do some experimental testing with this type of test.

If this test has some validity for selection of T/A and C/A personnel or if it can be further developed to have significant validity, it, ^{in use} ^{return} could "eventually" contribute a great deal to improving T/A and C/A effectiveness at NSP.

My second visit was
to see [redacted]
who impressed me as
a most capable man.
He is the most, perhaps
most responsible for
developing the philosophy
on which the reorganization
of G.C.H.Q. is based.
He went into considerable
detail concerning the
reasons for the changes.
I don't think I need go
into a full statement
of the reasons for making
the changes and the formulas
which, ^{were} established since they have
been set for the in
H. Col. Zeller's excellent
memorandum of 11 August
1951. [redacted] Red
is my signature, however,
the particular importance

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of the new Division J (dealt
to the [redacted] problem). He
was strongly convinced
that by focusing the
T/A, C/A, and other
skills ~~together~~ on the
[redacted] problem GCHQ's
efficiency in dealing
with that [redacted]

problem would be considerably
increased. He referred
specifically to the
success with which
the [redacted] [redacted]
[redacted]

[redacted] was having with
respect to [redacted] concerning
the development of
intelligence concerning the
[redacted] Navy. He looked
forward to similar
approaches to other segments
of the [redacted] industry
market.

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my third visit was
to the office of [redacted]

I discussed
various general features
of the GCHQ organization.
I also discussed with Mr.
Locklin the role of NSA/ASB
and he showed a good
deal of interest in the idea
of such a Board of outside
scientists and engineers
whether this is something
GCHQ should consider.
I should say that I
also talked with [redacted]
about
NSA/ASB, its functions,
how it operated, and
so on. He also showed
some interest in this idea.
I am sorry I did not
get to see [redacted]
He was away at the time.

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In the afternoon,
my first visit was with
[redacted] Head

of the Reporting Division. I
explained to him that
I was particularly interested
in [redacted] and that what
progress had been
made in the development

of indices of [redacted]
air, navy and army
activity which could be
[redacted] exhibited
or graphed in time.

He said [redacted] his
division had given
a great deal of attention
to this problem and
that in his opinion the
[redacted]

This is one of the following reports:
[redacted]
[redacted]
[redacted]
[redacted]
[redacted]

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had made considerable progress on it. He immediately arranged for me to visit that group. Before making the visit however,

we are an excellent briefing
on their ~~is~~ reporting
procedures, including
descriptions ~~and~~ ^{of} and
~~and~~ examples of their
various ~~standard~~ ^{forms} reports.

Leaving office Dr. Rutledge, 70
West 2d Ave. to visit the

the spirit nearly as I have.
I was very much impressed
by a graphical one that
they were developing to a. present

most activity of
all kinds as a function

Importantly, I was unable to learn
whether our proposal to
move forward with
going on a course
for a year

is fine. It seems to me
that this development
not only has pros and cons
for giving a man an
better initial ~~training~~
account of what
is going on with
respect to [redacted]
stand activity —
but has equally good
possibilities for
air activity.

There are, of course,
more than a dozen
U. S. [redacted] naval
officers in the [redacted]
[redacted] and I
presume they will bring
back to NSB some of the
ideas being developed there.

[redacted]
[redacted]
[redacted]
[redacted]

I believe, however, that it
would be useful if
some of our ^{USA} personnel
concerned with the
intelligence problem for

~~the~~ [redacted] air activity
could have some contact
with that group, since
the presentation problem
~~is~~ for [redacted] now?
and air activity ~~is~~
have many points of similarity.

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[redacted] were away
~~of~~ when I
was at GCHQ
and hence did
not get a good
first hand account
of the air activity at
GCHQ. I did, however,
pick up a good many
radio lights on it

As a matter of fact, ~~as~~
after my visit at
G C H Q and ~~as~~ ^{great interest in the work of G C H Q on the part} ^{which I discovered in my visit}
of AFSS to AFSS in the
December 1953
in connection with
the ~~Robertson~~ work of
the Robertson Study Group
I have been
wondering whether
there is enough liaison
between AFSS and G C H Q.
I would suggest serious
consideration of more contact
between these two groups than
seems to exist at present.

I found a good deal of similarity
of ~~of~~ outlook on the quantification
problem between [redacted]
of G C H Q and some of the
staff members at AFSS.

After my visit with the [redacted] wooden group [redacted] I returned to [redacted] [redacted] to further discussion - last. The problems of presentation. He is very much interested in the problem of developing sound indices of [redacted] novel, air and land activity and the presentation of the information. He is keenly aware [redacted] of the pitfalls in developing such indices, and of the necessity for developing the [redacted] indices through a close cooperation between those responsible for developing the information through analysis and those responsible for reporting.

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At this juncture it was
5 o'clock. I went home
with Col. Zeller and
had an excellent dinner
and delightful evening
with Col. and Mrs. Zeller.
Among other things we
discovered that all three
of us were graduates
of State U. at the University
of Iowa, and of course
we had many things
to talk about regarding the
University of Iowa!

On the morning of
September 11 (Saturday)
I spent nearly three
hours with Dr. I. J. Good
talking about many
of the ~~mathematical~~
mathematical
and statistical
problems which have
arisen in the work

I am very much impressed by
Dr. Good. I am very optimistic
it would be very useful for him
to speak at the next
Meeting of the [redacted] Society.

of his group. As these
problems are all
rather technical
I shall not attempt
to discuss them here.
Unfortunately, I did
not see [redacted]

He was playing chess
in a tournament in
Amsterdam at the time.

Finally, I regret to
say that [redacted]

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[redacted] there
away when I was at
G C H Q and hence
I did not have an
opportunity to get a
good first hand
account of T/S
activity at G C H Q.

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I did, however, pick
up a good many
sidelights on [redacted]
it from messrs.

[redacted] and Good.
I gained the impression
that there is a good
deal ~~of~~ ^{more} integration
of T/A and C/A effort
at GCHQ than at NSA,
and that in the
new GCHQ set up
there will be even
more integration.

I left Cheltenham
in the early afternoon
of September 11, and
after an overnight
stay in London I
flew to Paris where I
caught a MATS
plane at 6:00 P.M. on
September 12, arriving

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back in Washington, D.C.
the morning of September 13.

Finally, I should mention that I actually left Washington on August 31 by BHATS, arriving in Paris on September 1. I went to Amsterdam on September 2 and spent four days at the International Congress of Mathematicians before ~~going to GCHQ~~ making my visit to GCHQ.

I had originally planned to make the GCHQ visit first but found that at that time an even larger number of the staff personnel at GCHQ would have been away.

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In closing this memorandum
I want to thank the
Government of India
my appreciation to
Captain : Major General
on this work and
to Col. Pulling, Col. Zeller
and Dr. Bintledge for
making the arrangements
required in making the trip.
The arrangements were
excellent in every respect.